

Claims

1. A system for managing a set of messaging services,
characterized in that the system is adapted to:
receive a message belonging to a communication between an
5 end-user and a messaging service, wherein the message is sent from either
the messaging service or a terminal used by the end-user,
obtain data from the message, and when the data is a search key,
search at least one profile stored in a profile database by using the
search key, said profile being a data collection containing information about
10 either service providers, services, end-users, or customer care, and when
found,
perform at least one task defined by at least one profile which is
found in the profile database and which is created by one of the following
parties: a service provider providing the messaging service, a service opera-
15 tor controlling the messaging service, or the customer care acting on behalf
of the end-user.
2. The system as described in claim 1, characterized in that
the system is further adapted to:
generate the search key by using the data as input.
- 20 3. The system as described in claim 1, characterized in that
the message is sent by the end-user.
4. The system as described in claim 1, characterized in that
the message is sent by the messaging service.
5. The system as described in claim 1, characterized in that
25 system is further adapted to:
obtain a second search key from the message,
access a second profile from the profile database by using the
second search key, and
perform a second task defined in the second profile.
- 30 6. The system as defined in claim 1 and 3, characterized in
that for performing the task the system is adapted to:
form an input message in accordance with the message received
and the profile found,
send the input message to the messaging service, and
35 receive an output message, which the messaging service sends
as response to the input message.

7. The system as defined in claim 6, characterized in that for performing the predetermined task the system is further adapted to:

form a response message in accordance with the output message received and the profile found, and

5 send the response message to the end-user.

8. The system as defined in claim 1, characterized in that the system is further adapted to:

send and receive messages via a message router that provides messaging connectivity.

10 9. The system as defined in claim 1, characterized in that system contains logic for at least one of the following main tasks: service provider management, service management, user management, customer care management, and managing the quality of service.

15 10. The system as defined in claim 9, characterized in that the system contains at least one of the following user interfaces: a user interface of the service provider management intended for service operators, a user interface of the service management intended for service providers, a user interface of the user management intended for end-users, or a user interface of the customer care management intended for customer care personnel.

20 11. The system as defined in claim 10, characterized in that as response to a transaction initiated through one of the user interfaces, the system is adapted to add a profile in the profile database.

25 12. The system as defined in claim 11, characterized in that as response to another transaction initiated through one of the user interfaces, the system is adapted to update the said profile.

30 13. The system as defined in claim 9, characterized in that the service provider management is based on profiles, which include at least one of the following pieces of information: alternatives of a billing model, service usage limitations, service deployment rights, routing rules, a choice of a mobile subscribing integrated services digital network (MSISDN) number forwarding.

14. The system as defined in claim 13, characterized in that the billing model defines how and to whom the use of a service is billed.

35 15. The system as defined in claim 13, characterized in that the billing model includes a predefined limit, so that when the predefined limit

is reached, the system is adapted to perform at least one of the following operation: block the transaction of the service, block the use of the service, or provide a warning.

5 16. The system as defined in claim 11, characterized in that the system is adapted to address a charge relating to said transaction to at least one party defined by a service provider.

17. The system as defined in claim 13, characterized in that the alternatives of the billing model contain a list of price/tariff classes which are allowable for a service.

10 18. The system as defined in claim 13, characterized in that the alternatives of the billing model contains a list of price/tariff tags which are allowable for a service.

15 19. The system as defined in claim 17, characterized in that the system is adapted to set price/tariff classes to messages, the price/tariff classes being requested by the service and belonging to said list.

20. The system as defined in claim 10, characterized in that the system is adapted to support a service provider to delegate some subset of its rights to another service provider.

20 21. The system as defined in claim 10, characterized in that the system is adapted to support a service provider to create a profile for another service provider.

22. The system as defined in claim 13, characterized in that the service usage limitations limit the number of services to be deployed.

25 23. The system as defined in claim 13, characterized in that the service usage limitations limit the maximum throughput of a service.

24. The system as defined in claim 13, characterized in that the access control is based on a blacklist that defines illegal end-users of a service.

30 25. The system as defined in claim 13, characterized in that the service deployment rights concern deployment phases: SMSC simulator tests, end-to-end tests, and after that either a private usage or public usage phase.

35 26. The system as defined in claim 1 and 25, characterized in that the task defined by at least one profile found relates to one of the deployment phases.

27. The system as defined in claim 25, characterized in that the system contains means for granting the service deployment rights for at least one of the deployment phases.

5 28. The system as defined in claim 13, characterized in that the access control is based on a whitelist that defines legal end-users of a service.

29. The system as defined in claim 13, characterized in that the routing rules concern a set of shortcodes addressed to a service provider, a shortcode of the said set being mapped to a certain route, and the service
10 provider being able to map the shortcode to a service.

30. The system as defined in claim 13, characterized in that the system is adapted to route a message according to a shortcode of the message.

31. The system as defined in claim 13, characterized in that
15 the system is adapted to forward an MSISDN number of a message to a receiver of the message when the MSISDN forwarding is chosen.

32. The system as defined in claim 13, characterized in that the system is adapted to execute at least one of the following actions: the billing model, the service usage limitations, the service deployment rights, the
20 routing rules, the choice of an MSISDN number forwarding, wherein said action is initiated through the user interface of the service management and wherein said action is allowable by a service operator.

33. The system as defined in claim 10, characterized in that the system is adapted to execute at least one of following actions: specifying
25 a terminal type, ordering settings to a terminal, subscribing/unsubscribing to a service, updating an MSISDN number stored in a whitelist, wherein said action is initiated through the user interface of the user management.

34. The system as defined in claim 9, characterized in that profiles intended for the use of end-users have a hierarchical relationship so that a profile, which is higher in the hierarchical relationship, determines what
30 definitions are possible in another profile that is lower in the hierarchical relationship.

35. The system as defined in claim 9, characterized in that the system contains means that enable a customer care act on behalf of an
35 end-user.

36. The system as defined in claim 9, characterized in that the managing of the quality of service is based on a quality of service (QoS) level which includes at least a minimum performance for a service.

5 37. The system as defined in claim 36, characterized in that the minimum performance is measured as message throughput per time unit.

38. The system as defined in claim 36, characterized in that the minimum performance is measured as the number of messages.

39. The system as defined in claim 36, characterized in that the QoS level further includes a traffic priority.

10 40. The system as defined in claim 36, characterized in that the QoS level further includes a choice of method for reducing traffic.

41. The system as defined in claim 40, characterized in that the system is adapted to reduce the traffic by delaying the processing of a message until the messaging system is no longer overloaded.

15 42. The system as defined in claim 40, characterized in that the system is adapted to reduce the traffic by deleting a message received.

43. The system as defined in claim 36, characterized in that the system is adapted to:

20 calculate the resource usage of each service and
calculate the sum of the resource usage of services.

44. The system as defined in claim 36 and 43, characterized in that the system is adapted to determine whether the service has obtained the QoS level.

25 45. The system as defined in claim 1, characterized in that the system is adapted to store a transaction in a transaction database, said transaction being initiated by the message received.

46. The system as defined in claim 10, characterized in that the system is adapted to store a transaction in the transaction database, said transaction being initiated through one of the user interfaces.

30 47. The system as defined in claim 45 and 46, characterized in that the system is adapted to:
use the transaction database and
calculate statistics concerning at least one of the following user groups: a service operator, service providers, end-users, customer care.

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48. A method for managing the use of a set of messaging services,

characterized by the steps of:

5 receiving a message belonging to a communication between an end-user and a messaging service, wherein the message is sent from either the messaging service or a terminal used by the end-user,

obtaining data from the message, and when the data is a search key,

10 searching at least one data collection in a set of data collections by using the search key, said set of data collections containing information about either service providers, services, end-users, or customer care, and when found,

performing at least one task defined by at least one data collection which is found in the set of data collections and which is created by one of the following parties: a service provider providing the messaging service, a
15 service operator controlling the messaging service, or the customer care acting on behalf of the end-user.

49. The method as described in claim 48, characterized by the further steps of:

20 generating the search key by using the data as input.

50. The method as described in claim 48, characterized in that the message is sent by the end-user.

51. The method as described in claim 48, characterized in that the message is sent by the messaging service.

25 52. The method as described in claim 48, characterized by the further steps of:

obtaining a second search key from the message,

accessing a second data collection from the set of data collections by using the second search key, and

30 performing a second task defined in the second data collection.

53. The method as defined in claim 48 and 50, characterized in that for performing the task the method includes the steps of:

forming an input message in accordance with the message received and the data collection found,

35 sending the input message to the messaging service, and

receiving an output message which the messaging service sends as response to the input message.

54. The method as defined in claim 48, characterized in that for performing the predetermined task the method includes the steps of:

- 5 forming a response message in accordance with the output message received and the data collection found, and
- sending the response message to the end-user.